

MR. ARNOLD.—Wouldn't it be as well to express our opinion also with regard to the injury it is to grain? We know it is an injury to grain.

MR. WELLINGTON.—I have no objection to adding that.

The resolution was then put to the meeting, and carried in the following form:—"That in the opinion of this Association the sparrow is injurious to the fruit grower and farmer."

THE MAY GRUB.—*Lachnosterna fusca*.

The next subject was then announced, viz., "The best method of combatting the large white grub which is so often injurious to the roots of plants."

MR. ARNOLD.—It was I who suggested this subject; but I did so with a view of obtaining information as to how to combat it from the meeting. I have no method of my own except to catch the grub and pinch its head off. Some places in our section it destroys entire meadows—eats off the roots—and there is nothing left but a thin covering of dead grass. In newly planted strawberry beds I have known them run along the row after the plants have got nicely started perhaps, and cut everything off. It was in hopes of getting something from you, sir, as to the length of time the grub remains in the ground. They seem never to die. My impression is that the eggs are laid where there is grass or some protection of that sort. I find them worse always in a newly planted piece of ground—where we plant potatoes, for instance, on the sod. They seem to like strawberry roots better than any other roots that I know of. They will eat up potatoes and eat big holes in them.

THE PRESIDENT.—In reply to Mr. Arnold's request as to the habit of the insect, I might say that the parent beetle lays its eggs about the roots of grass generally, just about the surface, and they are most commonly enclosed in little rolls. Although the course of the insect's life has not been carefully watched as yet, it is the common belief amongst those who have the best opportunity of observing, that the insect is three years in reaching maturity. You can generally find in the soil grubs of three distinct sizes; and on the basis of that this conclusion has been reached. The time when their powers of destructiveness is greatest is when they have reached the last stage of their existence—when they are the largest. The fact that it takes three years to reach the stage of the greatest maturity accounts for there being a greater number of grubs some years than others. As far as strawberry culture is concerned it is almost impossible to carry it on successfully where these insects are very abundant, because they devour all the succulent roots. I do not know that they are particularly partial to the strawberry; they eat the soft roots of all sorts of plants.

MR. ROY.—Is that the same grub that is found in the hearts of dead trees?

THE PRESIDENT.—No.

MR. DENTON.—Last year I examined four or five acres where, as Mr. Saunders says, there was this rolling up, and thousands upon thousands of those insects were there. The owner of the lot came along whilst I was examining it, and asked what had best be done. Said I "Turn in your hogs." He did so, and they rooted, and ate a great many of those insects. However, he had to plough the ground up, and last summer was the first summer he got anything like a crop off it. He thinks that he has destroyed the insects that were there, and my impression is that he has done so. In ploughing up sod for garden purposes you will often find a number of these insects, and it has struck me forcibly that they are the ones who destroyed the plants the first year. It is my opinion that when sod is ploughed it should be thoroughly cultivated in order to get rid of them.

MR. MORRIS.—In the year 1881 we spent hundreds of dollars in fighting this insect, and in spite of all we could do our loss was still thousands of dollars. We found our ground literally alive with them—ground that had not been in sod for years. We found that they were worst in places that had been manured the year before. I suppose the beetle found that a good place to lay its eggs. On the south-east side of a slope we found them thick, while on the north-east side we would not find any, perhaps. My plan

to destroy it would be to use lime—lime which can be light—build bonfires into them. I believe it has been known to follow out. I have been told that it has any effect at all.

MR. PAGE.—

MR. BEALL.—In my opinion of a gentleman who has too largely withstood great deal with the remedy. He has said times that he did it grubs the better of himself. I mean the

THE PRESIDENT

MR. BEALL.—Whatever one that

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MR. DEMPSEY—those white grubs. of them destroyed beetle in the air even that we did not know not seen one-twenty some combustible number evening, we should quite inclined to do surface; or if many great many thousands hatching by the side under the soil quickly. I think, we can prevent will destroy them.

to my experience, they also destroy all vegetables.

MR. DOEL.—I noticed an immense small one, and I have it from an eighth to was not filled with grub when it is first

THE PRESIDENT—There are quite a number on dung, animal manure their eggs in manure is any probability of roots of plants, and on the roots. I have it a very pleasant plant hatched.

MR. DOEL.—I am growing along under my place eleven years now although we have a number of fowls, and